

1. First, find the equation of the line containing the two points below. Then, write the equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

$$(6, -7) \text{ and } (11, 6)$$

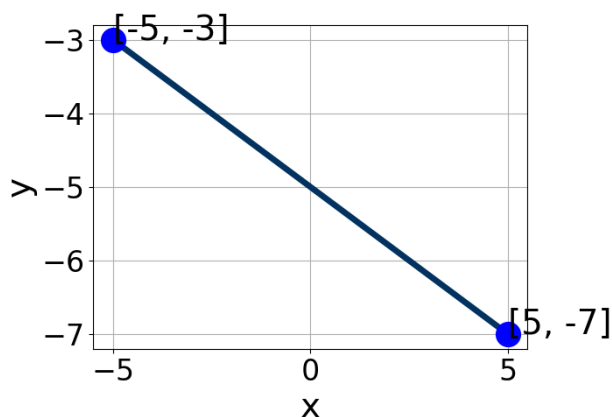
- A.  $m \in [-8.6, -1.6]$   $b \in [33.6, 36.6]$
- B.  $m \in [-0.4, 6.6]$   $b \in [18.6, 28.6]$
- C.  $m \in [-0.4, 6.6]$   $b \in [-22.6, -20.6]$
- D.  $m \in [-0.4, 6.6]$   $b \in [-11, -3]$
- E.  $m \in [-0.4, 6.6]$   $b \in [-15, -11]$
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2. Solve the equation below. Then, choose the interval that contains the solution.

$$-12(-14x + 17) = -4(-19x + 2)$$

- A.  $x \in [1.94, 2.27]$
- B.  $x \in [2.17, 2.43]$
- C.  $x \in [-2.67, -2.23]$
- D.  $x \in [0.78, 1.12]$
- E. There are no real solutions.
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3. Write the equation of the line in the graph below in Standard Form  $Ax + By = C$ . Then, choose the intervals that contain  $A$ ,  $B$ , and  $C$ .



- A.  $A \in [0.1, 1.5]$ ,  $B \in [0.6, 1.8]$ , and  $C \in [-10, -1]$   
 B.  $A \in [0.1, 1.5]$ ,  $B \in [-1.4, 0.1]$ , and  $C \in [3, 7]$   
 C.  $A \in [1.1, 4.4]$ ,  $B \in [3.4, 7.4]$ , and  $C \in [-26, -24]$   
 D.  $A \in [-2.2, -0.9]$ ,  $B \in [-6.1, -4.8]$ , and  $C \in [20, 32]$   
 E.  $A \in [1.1, 4.4]$ ,  $B \in [-6.1, -4.8]$ , and  $C \in [20, 32]$

4. Find the equation of the line described below. Write the linear equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

Parallel to  $6x - 7y = 13$  and passing through the point  $(2, -5)$ .

- A.  $m \in [1.13, 2.36]$   $b \in [-6.84, -4.95]$   
 B.  $m \in [-0.01, 1.02]$   $b \in [-6.84, -4.95]$   
 C.  $m \in [-0.01, 1.02]$   $b \in [6.69, 7.89]$   
 D.  $m \in [-0.01, 1.02]$   $b \in [-7.39, -6.76]$   
 E.  $m \in [-1.34, -0.72]$   $b \in [-3.91, -2.08]$

5. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{4x - 5}{4} - \frac{5x + 5}{3} = \frac{-8x - 9}{8}$$

- A.  $x \in [-0.7, 1.1]$

- B.  $x \in [-4.8, -3]$
  - C.  $x \in [5.2, 7.6]$
  - D.  $x \in [2.8, 4.1]$
  - E. There are no real solutions.
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6. Find the equation of the line described below. Write the linear equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

Parallel to  $6x + 5y = 7$  and passing through the point  $(-3, -10)$ .

- A.  $m \in [-1.12, -0.75]$   $b \in [-14, -12.98]$
  - B.  $m \in [-2.5, -0.92]$   $b \in [13.21, 13.82]$
  - C.  $m \in [0.75, 1.71]$   $b \in [-6.99, -6.29]$
  - D.  $m \in [-2.5, -0.92]$   $b \in [-14, -12.98]$
  - E.  $m \in [-2.5, -0.92]$   $b \in [-7.27, -6.62]$
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7. Solve the equation below. Then, choose the interval that contains the solution.

$$-18(19x - 12) = -13(-15x - 14)$$

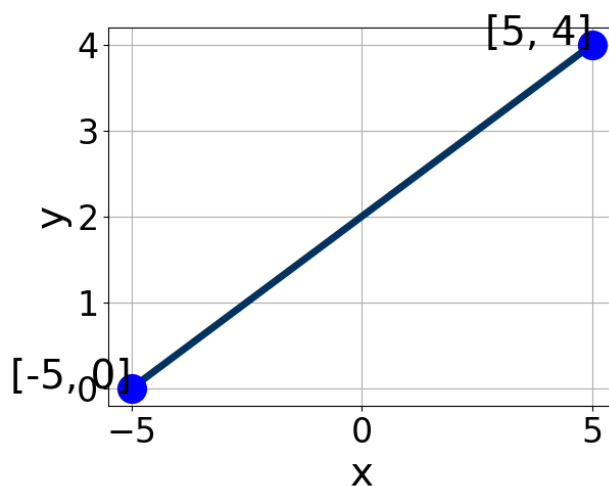
- A.  $x \in [-0.8, -0.54]$
  - B.  $x \in [0.05, 0.16]$
  - C.  $x \in [2.66, 2.9]$
  - D.  $x \in [0.58, 1.12]$
  - E. There are no real solutions.
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8. First, find the equation of the line containing the two points below. Then, write the equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

$$(9, 5) \text{ and } (10, -5)$$

- A.  $m \in [-12, -6]$   $b \in [-4, 0]$   
B.  $m \in [-12, -6]$   $b \in [-95, -91]$   
C.  $m \in [-12, -6]$   $b \in [93, 103]$   
D.  $m \in [-12, -6]$   $b \in [-16, -13]$   
E.  $m \in [8, 15]$   $b \in [-105, -102]$

9. Write the equation of the line in the graph below in Standard Form  $Ax + By = C$ . Then, choose the intervals that contain  $A$ ,  $B$ , and  $C$ .



- A.  $A \in [-6.4, -1.5]$ ,  $B \in [1.2, 6.5]$ , and  $C \in [4, 12]$   
B.  $A \in [0.8, 5.6]$ ,  $B \in [-5.3, -3.1]$ , and  $C \in [-15, -5]$   
C.  $A \in [-1.3, -0.3]$ ,  $B \in [-1.7, -0.3]$ , and  $C \in [-8, 1]$   
D.  $A \in [0.8, 5.6]$ ,  $B \in [1.2, 6.5]$ , and  $C \in [4, 12]$   
E.  $A \in [-1.3, -0.3]$ ,  $B \in [0.7, 3.9]$ , and  $C \in [1, 5]$

10. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{8x - 7}{5} - \frac{5x - 3}{4} = \frac{7x + 6}{7}$$

- A.  $x \in [-4.32, -1.32]$

- B.  $x \in [-5.63, -3.63]$
  - C.  $x \in [-0.38, 2.62]$
  - D.  $x \in [-16.38, -14.38]$
  - E. There are no real solutions.
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